May 12, 2004

Mr. Ray Williamson
Utilities Division Staff
Arizona Corporation Commission
1200 W. Washington
Phoenix, AZ 85007

Dear Mr. Williamson:

Attached is a proposal titled **"A Proposal for Developing Renewable Energy Generation in Excess of 1.1% of Annual Retail Electrical Energy in Arizona"**. This proposal is the effort by a number of groups and individuals to strengthen the Arizona Environmental Portfolio Standard. Many of those listed below as supporters of this proposal were members of the Cost Evaluation Working Group, and others provided testimony or information during the workshops organized by the ACC to study ways to change the EPS.

The information provided at the workshops has developed a much better understanding of Arizona's renewable resources and the status of the technologies available to exploit these resources. We also believe near consensus was developed during the workshops on a number of specific questions posed by the Commissioners. We believe our proposal captures the resource information and the consensus on certain topics in a way that will provide flexibility to the utilities, provide a much better opportunity for distributed generation projects, increase the percentage of renewable generation in the state, and provide adequate resources to fund the portfolio standard. We are docketing the proposal under the original EPS Docket number today.

If you have any questions on the proposal, please call me at (602) 431-0016 or Bud Annan at (480) 488-7858.

Sincerely,

Sean M. Seitz
President
Arizona Solar Energy Industries Association

PROPOSAL SUPPORTERS

Arizona Solar Energy Industries Association
Solar Energy Industries Association
Western Resource Advocates
SWEEP
Arizona Clean Energy Industries Alliance
Renewable Energy Leadership Group
Grand Canyon Chapter Sierra Club
Grand Canyon Trust
Interwest Energy Alliance
Distributed Energy Association of Arizona
Greater Tucson Coalition for Solar Energy
Kyocera Solar, Inc.
BP Solar, Inc.
Southwest Wind Power, Inc.
Universal Entech, LLC

A Proposal for Developing Renewable Energy Generation in Excess of 1.1% of Annual Retail Electrical Energy in Arizona.

May 11, 2004

This Proposal is based on a set of assumptions derived from the report of the Cost Evaluation Working Group (CEWG) and information provided at Open Meetings and Workshops following the CEWG effort:

1. The Commission decided to continue the annual increase in the portfolio percentage to 1.1 percent by 2007 and accepted the aggregate cost impact premium maximum guideline presented in the CEWG report.
2. Using the existing EPS ***baseline structure*** as the foundation of a revised and expanded Portfolio Standard appears to have strong support from stakeholders.
3. Substantial new information is now available on emerging technologies to help determine whether they have attained the aggregate cost impact maximum guideline established in the CEWG report.
4. Better information has been provided on the available renewable energy resource base.
5. If changes to the EPS are to be considered, the Commissioners asked for additional information on –
    a. Options for adding funds to the baseline EPS so utilities are given a realistic opportunity for success in attaining compliance with the 1.1 percent requirement;
    b. Options to increase the percentage of energy from commercially ready renewable energy technologies.

Given these assumptions, this proposal recommends that the existing EPS be expanded to an Arizona renewable portfolio standard policy that would provide additional funding support for the existing EPS and be based on three central concepts:

1. The existing EPS would be known as the Developmental Environmental Portfolio Standard or **DEPS** and would support an annual renewable energy generation goal of up to 1.1% of the retail electricity sold. Essentially this is the ***baseline*** element of the program described in the assumptions.
2. Renewable energy generation to meet an amount greater than 1.1% of annual retail energy would be supported by utility customer funding through the Commercially Ready Renewable Energy Standard or **CRRES**
3. Renewable energy generated from emerging technologies that a utility is willing to invest in without support from utility customer funds through R&D efforts or **R&DEPS**.

The proposal assumes that details of the three central concepts can be developed by affected stakeholders by continuing the efforts of the Standards Working Group established in the original EPS Rule.

DEPS Concept:

The DEPS is to be funded from the DEPS Surcharge collected from ratepayers and will continue with the existing EPS rules except as noted below. ***It is proposed that the Commission return demand side management (DSM) funds to the purpose originally intended. An estimate of these DSM funds is provided in Appendix A***. It is also expected that utility use of Surcharge funds will result in an ***annual*** aggregate project cost premium for DEPS technology installations that is not greater than the aggregate cost impact maximum guideline recommended by the CEWG report.

Increasing Surcharge Funds

The CEWG report noted the existing surcharge rate does not provide sufficient funds for the utilities to meet the 1.1 percent goal on the schedule contained in the Environmental Portfolio Standard rule. This proposal supports returning DSM funds for their original purpose and adequately funding the DEPS 1.1 percent requirement. To avoid large increases in the surcharge, this proposal recommends that the utilities meet the 1.1 percent DEPS requirement between 2010 and 2012 instead of on the schedule included in the current Environmental Portfolio Standard.

We recommend that the Commission incorporate flexibility in DEPS cost recovery because the exact costs and revenue streams are unknown. One way to accomplish this goal is for the Commission to set up an adjustor mechanism in a rate case for each utility if such an adjustor does not currently exist. The current APS rate case and upcoming TEP rate case present the opportunities to establish adjustors. The adjustor rate would initially be set to recover cost estimates for gradually meeting the 1.1 percent DEPS requirements by 2010 to 2012. The Commission or Staff would adjust the recovery rate from time to time to bring revenues and costs into balance.

To provide sufficient funds for the utilities to meet the DEPS 1.1 percent requirement, the current portfolio surcharge rate could be revised and caps increased or dropped entirely to provide adequate funding for each utility to meet the DEPS program goals. The table below presents an illustrative option for a cost recovery charge. The option is based on removing the caps and keeping the surcharge at the $0.000875/kWh existing rate – this approach would result in an effective 0.75% rate increase overall.

It is estimated that APS would need at least $20 million per year, increasing over time as kWh sales increase, to meet the 1.1 percent DEPS requirement by 2012. It is further estimated that TEP would need about $6.8 million per year, increasing over time, to fund the DEPS to meet the 1.1 percent requirement by about 2010.

TABLE 1. COMPARISON OF EPS SURCHARGE OPTIONS

TEP 2002 Summary of Portfolio Standard Surcharge Revenues

Surcharge Categories	*Surcharge Funds Paid*	*Retail Energy Sales per Category, MWh*	*Category $/kWh*	*No Cap - Possible Surcharge Funds at $.000875/kWh*
1. Residential	$1,205,956.46	3,188,726	0.000378	$2,790,135.25
2. Small commercial	$1,201,430.52	1,867,007	0.000644	$1,633,631.13
3. Large Commercial	$31,746.00	2,956,684	0.000011	$2,587,098.50
Utility Subtotals	$2,439,132.98			$7,010,864.88

APS 2002 Summary of Portfolio Standard Surcharge Revenues

1. Residential	$3,101,375.20	10,447,596	0.000297	$9,141,646.50
2. Small commercial	$3,439,219.20	10,338,456	0.000333	$9,046,149.00
3. Large Commercial	$31,150.60	2,575,703	0.000012	$2,253,740.13
Utility Subtotals	$6,571,745.00			$20,441,535.63
Total for TEP & APS	**$9,010,877.98**			**$27,452,400.50**

The Table shows the actual surcharge revenues in 2002 by customer group. However, because the EPS is currently partially paid for in base rates, we do not know how much any customer group is actually paying for the EPS in total. The table shows that the current surcharge of $0.000875 per kWh would bring in about $20 million for APS (at 2002 MWH sales levels) and about $7 million for TEP if there were no caps. This amount would grow over time as retail electricity sales increase. This uncapped surcharge rate is roughly sufficient to fund the 1.1 percent EPS requirement for both TEP and APS by 2012.

In this Surcharge funding option, all ratepayer categories pay increased amounts, but the relative percentage increase is greatest for the large commercial category (most of the customers in this category from the CEWG report are known as General Service customers, and this term is used going forward).

General Service Customer Class Self-Directed Option

One way to address the surcharge impact on larger customers in the General Service category is for the Commission to offer a "self-directed" option for this customer class. This option would allow General Service customers with single-site large demand facilities or smaller General Service customers with numerous dispersed locations and able to account for and aggregate demand (such as a major city or a corporate entity such as Home Depot) to commit to investing a specified amount of funds each year in DEPS qualifying systems on their facilities in lieu of paying the DEPS adjustor charge. The amount of funds invested would be commensurate with the amount the customers would have paid under the adjustor rate established by the Commission (such as the example shown in Table 1 above). This new DEPS option for the General Service category could be designed to have extra credit multiplier features similar to those available to the utilities. Such an approach would ensure that the policy structure designed to meet the 1.1 percent DEPS goal is maintained. It could also cause a competitive market for General Service class distributed generation projects to develop. Such a distributed

generation market, focused on the General Service category customers, would likely continue the progress made to date for reducing system and component costs demonstrated in residential and large utility-scale EPS installations.

Most importantly, the self directed option would allow the General Service category customers to control the use of their DEPS Surcharge funds to provide a direct benefit specific to the customer installing the systems. It would also encourage these customers to begin integrating renewable energy into their facilities and processes. Affected utilities would have to prepare a plan for administering their General Service customer Self-Directed program for approval by Commission Staff.[1] Utilities or General Service customers could add other funds to their DEPS programs if desired for meeting special peak demand requirements or for producing credits that could be sold to others to meet the DEPS.

Distributed Generation and Utility-Scale Components of the DEPS

Arizona's EPS policy is of a "bottom-up" form where the utilities collect the Surcharge funds and decide which projects will be funded to meet the EPS generation requirement. Nearly all other states are "top-down" in that a government or regulatory agency collects funds to be used for portfolio standard policy purposes, sets rules for the program and disburses funds to qualifying project owners or developers. Arizona's approach has resulted in a significant increase in utility-scale projects and truly significant reductions in installed large-scale system costs (especially balance of system costs). However, the distributed generation market for residential and small commercial customers has not developed as it has in top-down policy states such as California.

While there are many options to maintain the progress achieved by the utilities in utility-scale photovoltiac projects and to increase distributed generation, this proposal recommends that the utilities set aside a portion of the adjustor funds to be used solely for distributed generation projects. This set-aside should increase until the set-aside amount is equal 30 percent of the total adjustor funds. This set-aside increase schedule would apply to all affected utilities, but a possible set-aside schedule for TEP and APS could be:

- 2005 – 20 percent of Surcharge funds (using the example Surcharge values in the Table above); TEP = $1,400,000 and APS = $4,000,000
- 2006 – 25 percent of Surcharge funds; TEP = $1,750,000 and APS = $5,000,000
- 2007-2012 – 30 percent of Surcharge funds; TEP = $2,100,000 and APS = $6,000,000.

All affected utilities would be required to make Surcharge funds available to distributed generation projects. Uniform (statewide) incentive levels and program guidelines would be developed by the Standards Working Group and enacted by the Commission for the distributed generation portion of the DEPS. A customer awareness program would be developed and implemented using a portion of the set-aside funds. We strongly

[1] Among other things, these plans should address how utilities will review customer projects and how utilities will credit the output of customer directed projects against the utility DEPS goals.

encourage the ACC to adopt standard interconnection and net metering requirements for renewable technologies that qualify for the DEPS. Eligible technologies for the distributed generation program should include, but not be limited to: photovoltaics, solar water heating, small wind and solar HVAC systems. The uniform program would replace all existing EPS customer-related programs starting in 2005.

Any portion of funds reserved for the distributed generation portion of the DEPS program not used within a calendar year would be made available to the utility for its large-scale utility projects in the next calendar year. In a similar fashion, any portion of funds reserved for the utility-scale portion of the DEPS program not used by the utility within a calendar year would be made available for use in distributed generation projects in the next calendar year.

DEPS Termination Date

The technologies qualifying for adjustor funding in the DEPS are developmental in nature. As these technologies mature and cost less, the funds provided to support their adoption in Arizona should be reduced or stopped. Consequently, we recommend the DEPS terminate in 2012 as originally planned.

If other developmental technologies begin to show potential for use in Arizona's energy portfolio, Commission Staff could propose a new program to specifically address the new opportunities.

Energy Generation Cost Range for DEPS Qualifying Technologies:
(Wholesale Cost + 5 cents/kWh) to (Wholesale Cost + 11 cents/kWh)

CRRES Concept:

The CEWG Report showed that two renewable energy projects had positive net benefits – the TEP landfill gas project and the solar trough hot water project. During Commission-sponsored workshops, information on other technologies, including wind, geothermal, biomass power, and solar trough/natural gas hybrid systems, was provided showing that these resources could be potentially competitive with conventional electricity generation options. Generation capacity from these technologies could be used to meet a Commercially Ready Renewable Energy Standard (CRRES). Commercially Ready Renewable Energy resources are those which cost no more than $0.05 per kWh above the market cost for conventionally generated electricity as explained in more detail below. The CRRES would have a term of at least 30 years to allow certainty in long term renewable energy contract development. Alternately, the CRRES could have no termination date.

We propose that the CRRES be set as follows: subject to the limitations set forth below, utilities should obtain zero percent of retail sales in 2005 increasing, by year, to 8 percent by 2010 and thereafter from new, eligible, commercially ready renewable energy

resources. Eligible resources are solar energy, geothermal, wind, biomass (excluding municipal solid waste and tire burning), and low impact hydro resources.

We believe that there are sufficient resources in Arizona and neighboring states to meet this 8 percent target. For example, information provided at the Tucson and Flagstaff public comment workshops included estimates of the wind and biomass resource capacity available in Arizona. Based on those workshops, it appears about 1,060 MW of additional renewable generation capacity is available from in-state sites by 2010. But, there was uncertainty about: the rate at which these renewable resources can be developed, licensing timelines, transmission needs and availability, and the availability of financing. Further, there is uncertainty about the size of potential national forest waste resources on a sustainable basis given a possible shift in forest health management policies in the future.

Tucson Electric Power Company also estimated, roughly, that there may be 100 MW of biomass generation capacity from in-state sites. This estimate includes 30 MW of new landfill gas, 60 MW of power generation from forest waste (assuming sustainable forest harvesting), and 10 MW of agricultural waste or byproduct generation. About 1,000 MW of Class IV or better of wind sites were identified from the latest computer generated wind model by TEP and other parties, but transmission availability and the time period for commercial development must yet be determined.

Renewable resources are being developed in neighboring states as well. For example, Public Service Company of New Mexico is acquiring energy from 204 MW of capacity installed at the New Mexico Wind Energy Center and Salt River Project plans to obtain 25 MW of geothermal power from a facility near the Salton Sea in California.

We recommend that there be a mechanism to modify CRRES annual renewable energy production goals if renewable resource generation projects cannot be permitted or financed or if transmission cannot be obtained in a timely manner through no fault of the utility. For example, a utility could request that the Commission modify the implementation schedule for the CRRES for good reason with no penalty to the utility.

We recommend that tradable renewable energy credits be permitted (as they are now) and that the life of such credits be at least 15 years to provide the utilities and project developers flexibility in light of the uncertainty over renewable resource size and availability.

We also recommend that the Commission establish a cost recovery mechanism that will adequately fund resource acquisitions under the CRRES. For example, the Commission could establish an adjustment mechanism in a utility's current or next rate case that would provide equitable recovery of **above-market costs** of generation, transmission and integration of the renewable resources developed in meeting the goals of the CRRES.[2]

[2] If a utility has a fuel and purchased power adjustment mechanism, the determination of above market costs may be automatic.

The Commission could review the adjustor rate from time to time to bring recoverable costs into balance with revenues. Calculation of above-market costs should consider the energy and capacity values of renewable energy resources and any actual realized value of environmental benefits of renewable resources; environmental benefits could be valued at transacted market prices for tradable emission reduction credits, for example. Revenues from the sale of renewable energy and environmental credits associated with the renewable energy should be credited against the cost of production, delivery and integration of renewable energy.

We recommend against the use of deferral accounts for cost recovery because such accounts increase costs to customers and because of the uncertainty of cost recovery such accounts create for utilities.

We recommend that there be no multipliers for any renewable energy technologies to favor particular technologies or to promote other goals. Utilities should be allowed to bid assets into the CRRES through an arms length subsidiary. Some parties believe that evaluation of CRRES resource bids should include a factor for "In Arizona" economic impacts of renewable resource generators located in Arizona when comparison to out-of-state renewable resource bids was made for the purpose of contract award. If used, the "In Arizona" economic impact factor would be developed by each utility and approved by the Commission prior to application in bid evaluations.[3]

Finally, we recommend that the Commission form a Working Group to develop a recommendation to the Commission by June 30, 2008 on how to increase the Commercially Ready Renewable Standard above 8 percent of retail kWh sales after 2010.

Energy Generation Cost Range for CRRES Qualifying Technologies:
(Less Than Wholesale Cost) to (Wholesale Cost + 5 cents/kWh)

R&DEPS Concept:

The existing EPS Rule allowed utilities to use up to 10% of Surcharge funds in 2001 for R&D purposes and limited R&D costs in 2002 and 2003 to 5% of Surcharge funds. No provision for R&D project costs is made between 2004 and 2012.

Some utilities believe that emerging technologies that do not currently meet the CEWG-determined aggregate cost impact maximum guideline should continue to be evaluated. If a utility decides to pursue a renewable energy project using technologies that do not meet the aggregate cost impact maximum guideline (through actual measurement of project output by methods established by the Standards Working Group), funding for such projects must be provided from utility (corporate) funds until the technology can, in aggregate with other renewable energy development DEPS projects, meet the aggregate cost impact maximum premium guideline ***on an annual basis***. If a utility makes such a

[3] The Commission should consider the effect of the Commerce Clause on any proposed in-state preference.

corporate funds investment in emerging technologies, the utility would earn an R&D Extra Credit to be used in meeting the DEPS goal related to the electricity generated by the installation that would be in addition to the generation and Extra Credit Multipliers in effect in the Existing Rule. As an example, if an R&D project qualified for credits of 2.5 under the existing Rule (1.0 for generation and 1.5 if the project met all Extra Credit Multiplier provisions), the R&D project would receive a total credit of 3.5 which could be applied to meet the DEPS requirement. If an R&DEPS technology in aggregate with other renewable energy development projects meets the CEWG annual aggregate cost impact maximum guideline level prior to 2013, the technology would then qualify for adjustor funds under the DEPS as do other developmental renewable technologies currently able to meet the aggregate cost impact maximum guideline.

Energy Generation Cost Range for R&DEPS Qualifying Technologies:
Above Wholesale Cost + 11 cents/kWh

APPENDIX A

Environmental Portfolio Standard (EPS) Revenues and Restoration of DSM Funding

(Based on 2002 data summarized in CEWG Report)

Historical Analysis of 2002 EPS Revenues, from CEWG Report

Description of Funding Mechanism	APS 2002 EPS Revenues	TEP 2002 EPS Revenues	Total 2002 EPS Revenues	Restoration of DSM Funding (2002 Level)	Renewables SB Funding in the DSM Funding Row
Green Pricing Program Total	$ 259,628	$ 67,573	$ 327,201		
Reallocation of DSM Funding	$ 6,000,000	$ 2,010,000	$ 8,010,000	$ 8,010,000	
DSM SB Funding in above	*$ 6,000,000*	*$ 1,800,000*	*$ 7,800,000*	$ 7,800,000	
Renewables SB Funding in above	*$ -*	*$ 210,000*	*$ 210,000*		$ 210,000
Residential Surcharge Total	*$ 3,101,375*	*$ 1,205,956*	*$ 4,307,332*	*Increase EPS*	
Small Commercial Surcharge Total	*$ 3,439,219*	*$ 1,202,431*	*$ 4,641,650*	*Funding by*	
Large Commercial Surcharge Total	*$ 31,151*	*$ 31,746*	*$ 62,897*	*Increasing EPS*	
EPS Renewables Surcharge Total*	$ 6,571,745	$ 2,440,133	$ 9,011,878	*Surcharge or Changing Caps*	
Total	$ 12,831,373	$ 4,517,706	$ 17,349,079		

* The Renewables Surcharge Total includes only the Residential, Small Commercial and Large Commercial Surcharge Totals. Current EPS surcharge is the lesser of $0.000875 per kWh per month or the monthly caps per service of $.35 (residential), $13 (small C&I), and $39 (large C&I above 3,000 kW demand).

Restoration of DSM Funding and Total DSM Funding

Utility	Existing 2005 DSM Funding*	Restoration of DSM Funding**	Renewables SB Funding	Total DSM Funding**	DSM Funding as a % of 2002 Revenues	Reference EIA: 2002 Retail Revenues (000)
APS	$ 1,100,000	$ 6,000,000	$ -	$ 7,100,000	0.38%	$ 1,845,556
TEP	$ 1,050,000	$ 2,250,000	$ 210,000	$ 3,300,000	0.50%	$ 666,049
UNS Electric	$ 175,000	$ -	$ -	$ 175,000	0.16%	$ 106,527
Total	$ 2,325,000	$ 8,250,000	$ 210,000	$ 10,575,000	0.40%	$ 2,618,132

* DSM funding for 2005, based on documents presented by the utilities in the ACC DSM workshops.

** Total DSM funding and restored DSM funding for future years may be slightly higher than the amounts estimated in the first table above, which were based on 2002 data, given the funding mechanisms, collection surcharges, and the higher-than-2002 retail energy sales in 2005 and future years. For example, in the ACC DSM workshops TEP has estimated total DSM funding of $3.3 million in future years, and $2.25 million to be restored to DSM.

Notes on utility-specific allocations:

APS:

TEP: TEP has stated that $210,000 of SBC funds used for renewable development purposes will remain for renewable energy program purposes.

UNSE: UNS Electric did not reallocate DSM funds to support the EPS in the past. Therefore, "restoration of DSM funding" does not apply to UNSE.